The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Currently amended) A method for generating storage-stable competent cells, which comprises drying competent cells at a temperature greater than freezing so as to generate storage-stable competent cells, wherein said cells are ~~suspended in the liquid state immediately prior to said~~ not frozen at the time of said drying.

2. The method of claim 1, wherein said cells are bacterial cells.

3. The method of claim 2, wherein said bacterial cells are gram negative cells.

4. The method of claim 1, wherein said cells are made competent by exposure to an electroporation buffer.

5. The method of claim 1, wherein the cells are dried for a single uniform temperature.

6. The method of claim 1 or 5, wherein the cells are dried for at least 8 hours.

7. The method of claim 1, wherein the cells are made competent by exposure to a chemical agent.

8. The method of claim 7, wherein said chemical agent is $CaCl_2$.

9. The method of claim 1, wherein said competent cells can be stored at temperatures above -80°C for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

10. The method of claim 9, wherein said competent cells can be stored at temperatures of -20°C or above for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

11. The method of claim 10, wherein said competent cells can be stored at temperatures of 0°C or above for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

12. The method of claim 11, wherein said competent cells can be stored at temperatures of 4°C or above for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

13. The method of claim 12, wherein said competent cells can be stored at temperatures of 15°C or above for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

14. The method of claim 11, wherein said competent cells can be stored at temperatures of 20°C or above for at least one month and maintain transformation efficiencies of at least 10^5 transformants/μg DNA.

15. The method of claim 1, wherein said cells are dried at a temperature above 0°C.

16. The method of claim 15, wherein said cells are dried at a temperature above 4°C.

17. The method of claim 16, wherein said cells are dried at a temperature at or above room temperature.

18. The method of claim 17, wherein said cells are dried at 30°C.

19. The method of claim 1, wherein said competent cells are exposed to non-atmosphere pressure during drying.

20. The method of claim 1, wherein said competent cells are dried under vacuum.

21. The method of claim 1, wherein said competent cells are dried in the presence of a glass-forming matrix material.

22. (Currently amended) The method of claim <u>21</u> ~~20~~, wherein said glass-forming matrix material comprises at least one carbohydrate.

23. (Previously amended) The method of claim 22, wherein said at least one carbohydrate comprises a saccharide.

24. The method of claim 21, wherein the glass-forming matrix is water-soluble.

25. The method of claim 23, wherein said saccharide is selected from the group consisting of a disaccharide, an oligosaccharide, a polysaccharide, a sugar alcohol, a sugar ether, a sugar acid, derivatives thereof, and combinations thereof.

26. The method of claim 23, wherein said saccharide is a non-reducing sugar.

27. The method of claim 23, wherein said saccharide is selected from the group consisting of trehalose, sucrose, melzitose, raffinose, maltitol, sorbose, lactitol, dextrose, derivatives thereof, and combinations thereof.

28. (Currently amended) The method of claim 23, wherein said saccharide is a polysaccharide is selected from the group consisting of amylose, FICOLL™ ~~ficollTM~~, dextrin, starch, dextran, and polydextrose.

29. The method of claim 21, wherein said glass-forming matrix material comprises a polyol.

30. The method of claim 29, wherein said polyol is selected from the group consisting of a sugar polyol, propylene glycol, polyethylene glycol, derivatives thereof, and combinations thereof.

31. The method according to claim 21, wherein said glass-forming matrix material comprises a polymer selected from the group consisting of polyvinylpyrolidone, polyacrylamide, polyethyleneimine, and albumen.

32. The method of claim 22, wherein the concentration of said carbohydrate is at least 20% (weight/volume).

33. The method according to claim 22, wherein said carbohydrate comprises a saccharide and a sugar alcohol.

34. The method according to claim 33, wherein said saccharide is trehalose.

35. The method according to claim 33 or 34, wherein said sugar alcohol is sorbitol.

36. The method according to claim 33, wherein said saccharide is a hydrated saccharide.

37. The method of claim 36, further comprising the step of storing said competent cells at a temperature at or above –20°C.

38. The method of claim 37, further comprising the step of storing said competent cells at a temperature at or above 0°C.

39. The method of claim 38, further comprising the step of storing said competent cells at a temperature at or above 4°C.

40. The method of claim 39, further comprising the step of storing said competent cells at a temperature at or above 15°C.

41. The method of claim 40, further comprising the step of storing said competent cells at a temperature at or above room temperature.

42. The method of claim 37, wherein said competent cells are stored in a sealed pouch.

43. A method of transforming cells with exogenous nucleic acids comprising, obtaining cells generated according to the method of claim 1, rehydrating the cells, and contacting the cells with said nucleic acids.

44. The method of claim 43, further comprising the step of exposing the cells to at least one electrical pulse.

45. The method of claim 43, wherein said cells are rehydrated in transformation buffer or electroporation buffer.

46. The method of claim 43 or 44, wherein said cells exhibit transformation efficiencies of at least 1×10^5 transformants/μg DNA.

47. A composition comprising a glass-forming matrix material and competent cells, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 15°C.

48. The composition of claim 47, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than room temperature.

49. The composition of claim 48, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 20°C.

50. The composition of claim 49, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 25°C.

51. The composition of claim 50, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 30°C.

52. The composition of claim 51, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 40°C.

53. The composition of claim 52, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 45°C.

54. The composition of claim 53, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 50°C.

55. The composition of claim 54, wherein the glass transition temperature (Tg) of the matrix-cell mixture is greater than 60°C.

56. The composition of claim 47, wherein the transformation efficiency of said cells comprises at least 10^5 transformants/μg DNA.

57. (Amended) The composition of claim 47, wherein the transformation efficiency of said cells comprises at least 10^6 transformants/μg DNA.

58. The composition of claim 47, wherein said glass-forming matrix comprises at least one carbohydrate.

59. The composition of claim 58, wherein said carbohydrate comprises a saccharide.

60. The composition of claim 59, wherein said saccharide is selected from the group consisting of a disaccharide, an oligosaccharide, a polysaccharide, a sugar alcohol, a sugar ether, a sugar acid, derivatives thereof, and combinations thereof.

61. The composition of claim 59, wherein said saccharide comprises a non-reducing sugar.

62. The composition of claim 59, wherein said saccharide is selected from the group consisting of trehalose, sucrose, melzitose, raffinose, maltitol, sorbose, lactitol, dextrose, derivatives thereof, and combinations thereof.

63. (Currently amended) The composition of claim 59, wherein said saccharide comprises a polysaccharide selected from the group consisting of amylose, FICOLL™ ~~ficollTM~~, dextrin, starch, dextran, and polydextrose.

64. The composition of claim 58, wherein said carbohydrate comprises a saccharide and a sugar alcohol.

65. The composition of claim 64, wherein said saccharide comprises trehalose.

66. The composition of claim 64, wherein said sugar alcohol comprises sorbitol.

67. The composition of claim 47, wherein said glass-forming matrix material comprises a polyol.

68. The composition of claim 67, wherein said polyol is selected from the group consisting of a sugar polyol, propylene glycol, polyethylene glycol, derivatives thereof, and combinations thereof.

69. The method according to claim 47, wherein said glass-forming matrix material is a polymer selected from the group consisting of polyvinylpyrolidone, polyacrylamide, polyethyleneimine, and albumen.

70. The composition of claim 47, wherein at least 5% of said cells are viable upon rehydration.

71. The composition of claim 70, wherein at least 10% of said cells are viable upon rehydration.

72. The composition of claim 71, wherein at least 15% of said cells are viable upon rehydration.

73. The composition of claim 72, wherein at least 20% of said cells are viable upon rehydration.

74. The composition of claim 71, wherein at least 30% of said cells are viable upon rehydration.

75. A kit comprising a composition according to claim 47, wherein said matrix-cell mixture is stored in a sealed pouch.

76. The kit of claim 75, wherein the kit further comprises a sample of nucleic acids in a container which is separated from said sealed pouch.

77. The kit according to claim 75, wherein said nucleic acids are lyophilized.

78. A method of producing a recombinant polypeptide comprising:
obtaining cells generated according to the method of claim 1; rehydrating the cells;
contacting the cells with a nucleic acid encoding said recombinant polypeptide; and
growing said cells in a cell growth media under conditions in which the cells produce said polypeptide.

79. The method of claim 78, in which cells which have taken up said nucleic acid are separated from cells which have not taken up said nucleic acids.

80. The method of claim 78, wherein said recombinant polypeptide is isolated from said cells.

81. (Cancelled herein)

82. (Cancelled herein)